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13	NORTHERN DISTRICT OF CALIFORNIA SAN JOSE DIVISION			
14	MOUSSA KOUYATE, DAVID FREIFELD,	No.		
15	JARELL BROWN, AND MICHELE KIELBASA, individually and on behalf of all others similarly	COMPLAINT		
16	situated,			
17	Plaintiffs,	CLASS ACTION		
18	V.	DEMAND FOR JURY TRIAL		
19	APPLE, INC.,			
20	Defendants.			
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No. COMPLAINT

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No. ii COMPLAINT

Plaintiffs Moussa Kouyate, David Freifeld, Jarrell Brown, and Michele Kielbasa, on behalf of themselves and all others similarly situated, bring this suit for damages and injunctive relief based upon personal knowledge as to the facts pertaining to themselves, and upon information and belief as to the facts pertaining to others, as well as upon investigation of counsel, against Defendant Apple, Inc., for violations of Sections 1 and 3 of the Sherman Act (15 U.S.C. § 1, 3) and various state antitrust and consumer protection laws.

I. INTRODUCTION

- 1. On March 21, 2024, the Department of Justice and 16 state and district attorneys general commenced a civil antitrust action against Apple, Inc. for monopolization or attempted monopolization of smartphone markets in the United States. In their complaint, the DOJ and attorneys general allege that Apple has acted—intentionally, concertedly, and repeatedly—to hinder competition and innovation in the smartphone market to protect its outsized monopoly profits.
- 2. Apple responded heatedly to the DOJ's action, stating, "At Apple, we innovate every day to make technology people love ... This lawsuit threatens who we are and the principles that set Apple products apart in fiercely competitive markets. If successful, it would hinder our ability to create the kind of technology people expect from Apple—where hardware, software, and services intersect."
- 3. Apple's statement is consistent with the carefully crafted and cultivated image it has long sought to project: a consumer-focused, innovative company—an outsider, even, fighting Microsoft's dominance. As Apple weathered dire financial straits and faced the prospect of bankruptcy in the 1990s, Apple co-founder Steve Jobs criticized Microsoft's monopoly and accused its competitor of "dirty tactics" targeting Apple, which prompted the company "to go to the Department of Justice" in hopes of getting Microsoft "to play fair."
- 4. But times have changed. Apple now regularly ranks as the world's most profitable company (occasionally trading the top spot with its historic rival, Microsoft), a position Apple gained in significant part through dominance of the smartphone market, yielding outsized margins and astronomical profits. And to protect its power, Apple deviated far from of its image as an innovative upstart who welcomed competition on the merits.

- 5. Apple took advantage of developers and content creators who created apps that enhanced the value of the iPhone. Apple repeatedly stifled innovation, through a host of shifting contractual restrictions, by denying key points of connection, and by degrading or blocking competitive technologies that might undercut Apple's monopolistic profits and position atop the market. And Apple leveraged its position as an intermediary to suppress cross-platform technologies that would promote competition, necessitating the intervention of government authorities to enforce the antitrust laws to protect a competitive marketplace. Perhaps ironically, these tactics are much like those Apple called "dirty" and abusive when it accused Microsoft of using them.
- 6. In short, Apple undermines apps, products, and services that would otherwise make users less reliant on the iPhone, promote interoperability, and lower costs for consumers and developers. Apple's intention through the challenged conduct was not to create technology people "loved"—quite the contrary. Apple's goal was to lock consumers into its "ecosystem" of hardware, software, and services, and to prevent iPhone users from switching to other smartphones. As early as 2010, Apple's then-CEO Steve Jobs discussed how to "further lock customers into our ecosystem" and "make Apple['s] ecosystem even more sticky." Three years later, Apple executives were still strategizing how to "get people hooked to the ecosystem."
- 7. Apple sought to suppress consumer choice and restrict consumer options, preferring to lock consumers into its monopolistic system, at the expense of innovation. Apple's vice president of iPhone marketing explained in February 2020: "In looking at it with hindsight, I think going forward we need to set a stake in the ground for what features we think are 'good enough' for the consumer. I would argue were [sic] already doing *more* than what would have been good enough." After identifying old features that "would have been good enough today if we hadn't introduced [updated features] already," she explained, "anything new and especially expensive needs to be rigorously challenged before it's allowed into the consumer phone."
- 8. Apple controls both the creation and distribution of iPhone apps through its stranglehold on the App Store in several ways:
 - A. Apple only permits the distribution of native iPhone apps through Apple's App Store—and the App Store is, in turn, the only way for users to download native iOS apps.

Developers therefore cannot rely on alternative app stores for the distribution of their apps, products and/or services, and consumers are denied the ability to access app stores that might better reflect their preferences with respect to privacy, security, or other values.

- B. Concerning creation, through the App Store, Apple sets the conditions for apps it will allow, through its App Store Review Guidelines. Apple has sole discretion to review and approve apps and app updates, allowing it to selectively exercise that discretion to its benefit, and arbitrarily, to penalize or restrict developers and technologies that threaten to disrupt, disintermediate, compete with or erode Apple's monopoly power.
- C. Apple further controls app creation by deciding which APIs it will make available to developers, and by requiring developers to enter into a non-negotiable Developer Program License Agreement (DPLA). That agreement requires developers to use public APIs only "in the manner prescribed by Apple." It also prohibits third-party apps from using APIs that Apple designates as "private." Apple selectively designates APIs as public or private to benefit Apple, limiting the functionality developers can offer to iPhone users even when the same functionality is available in Apple's apps, or even select third-party apps.
- 9. Apple's anticompetitive conduct in the smartphone market is not limited to its grip on iOS app creation and distribution through the App Store. Apple's anticompetitive course of conduct has many strains and continues to evolve. Apple's intent to monopolize the smartphone market and its actions to exclude competition is exemplified by at least five products and services it has targeted:
 - A. Super App: Super apps provide multiple services bundled into a single app or platform. Mini programs offering unrelated services can be mixed and matched into a single app—say a single app that lets you bank, chat with friends, order food, shop for groceries, refill prescriptions, etc.—so the user can perform multiple functions in a single app instead of multiple different apps. Such mini programs within a super app take advantage of standard programming languages such as HTML5 and JavaScript and therefore do not depend upon the iPhone's API or code. A single mini program can therefore work cross-platform—meaning it works whether users have an iPhone or another smartphone—and therefore can facilitate switching between an iPhone and a non-iOS device. Because super apps facilitate user

switching, effectively providing an escape from the Apple ecosystem, Apple sought to block and thereby suppress super apps and the competition and disintermediation of the iPhone platform that they threatened.

- B. Cloud Gaming Apps: Many popular modern games can be computationally intensive, requiring powerful hardware if the game program is run and stored on a smartphone itself. However, if a computationally intensive program is run from a remote server, and streamed back to the smartphone, powerful hardware is not necessary. Cloud gaming apps thus promise rich gaming experiences on smartphones without the need for powerful, expensive hardware, such as an iPhone. Apple therefore sought to suppress cloud gaming apps, which would reduce reliance on expensive hardware, and facilitate switching away from the iPhone.
- C. Messaging Apps: Messaging apps are indisputably central to the functions provided and commonly used on a smartphone. Recognizing the importance of messaging to the user and to the experience of using a smartphone, Apple acted to degrade third-party messaging apps as well as those apps' compatibility with Apple's own Message app, and thereby lock users into its native app. Again, Apple's motivation is the maintenance of its monopoly, by degrading the usability of competitor smartphones to lock users into the iPhone.
- D. Smartwatches: Apple likewise engaged in anticompetitive conduct to promote the sales of its smartwatch—the Apple Watch—and to throw up another bulwark against iPhone users switching to competitor smartphones. Smartwatches are accessories that generally must be paired with a smartphone to enjoy full functionality. To promote the sales of Apple's smartwatch—the Apple Watch—and further lock users into the iPhone, Apple degrades the functions of third-party smartwatches when paired with iPhones and makes its Apple Watch compatible only with the iPhone.
- E. Digital Wallets: Digital payments are rapidly increasing as a proportion of transactions, with an increasing number of Americans using smartphones for payments. To further entrench its monopoly, extend the reach of the Apple ecosystem, and lock users into its proprietary Apple Wallet product, Apple has denied critical points of access to third-party digital wallet apps. Apple has done this through several restrictions, including denying third-

party developer access to near-field communications hardware that is essential for "tap to pay" functionality. Apple has also prohibited third-party wallet apps for in-app payments (IAP), degrading the functionality and appeal of competing digital wallet programs.

- 10. As technology evolves, Apple continues to evolve and shift its anticompetitive behavior to protect its monopoly power. For example, in recent years, Apple has increasingly moved into offering subscription services, including news, games, video, music, cloud storage, and fitness subscriptions that could be used to keep users tethered to the platform. These subscription services and other ancillary fees are a significant part of Apple's net revenue. Concerning payments, Apple is seeking to expand its ecosystem even further, and "Apple envisions that Apple Wallet will ultimately supplant multiple functions of physical wallets to become a single app for shopping, digital keys, transit, identification, travel, entertainment, and more," and that it will contribute to the stickiness of the Apple ecosystem.
- 11. Apple exercises its monopoly power to extract more money from consumers, developers, content creators, artists, publishers, small businesses, and merchants, among others; to stifle innovation and competition in the market; and to reduce or inhibit consumer choice. Apple leveraged its role to extract rents and profits at every conceivable step, e.g.:
 - A. Apple has charged, for most of the last 15 years, a tax on app developers in the form of a 30% commission on the price of any app downloaded from the App Store. While Apple has reduced the tax it collects from a subset of developers, Apple still extracts 30 percent from many app makers.
 - B. Apple then charges developers a 30% tax again on any in-app payments (IAP), and blocks developers from using any in-app payment method other than Apple's IAP.
 - C. Apple blocks competing digital wallets, forcing consumers to use Apple's digital wallet app. Since Apple first launched Apple Pay—long before it achieved meaningful adoption—Apple has charged issuing banks 15 basis points (0.15 percent) for each credit card transaction mediated by Apple Pay. In contrast, payment apps from Samsung and Google—unavailable to Apple iPhone users—are free to issuing banks.

12. Relief is necessary to correct Apple anticompetitive behavior, which has extracted outsize monopoly profits from American consumers, inhibited consumer choice, and stifled innovation, and threatens to expand into additional areas of American life, further stifling choice, innovation, and entrenching Apple's influence across multiple industries.

II. PARTIES

- 13. Plaintiff Moussa Kouyate is a resident of the State of New York. He has purchased several iPhones spanning many years, including an iPhone 13 directly from Defendant Apple in 2022 and an iPhone 15 directly from Defendant Apple in 2023.
- 14. Plaintiff David Freifeld is a resident of the State of Illinois. He purchased several iPhones spanning many years, including an iPhone in 2021 directly from Defendant Apple.
- 15. Plaintiff Jarell Brown is a resident of the State of New Jersey. She purchased several iPhones spanning many years, for herself and members of her family, including 2 iPhone 14s directly from Apple in 2022 and other Apple smartphones other than directly from Apple.
- 16. Plaintiff Michele Kielbasa is a resident of the State of Illinois. She purchased several iPhones spanning many years, including an iPhone 13 directly from Defendant Apple in 2022.
- 17. Defendant Apple, Inc. is a public company headquartered in Cupertino, California and incorporated in California. Apple was founded in 1976 and is now one of the world's most valuable public companies, with net revenue in excess of \$383 billion for the 2023 fiscal year, and a market cap exceeding \$2.7 trillion.

III. JURISDICTION AND VENUE

- 18. Pursuant to 28 U.S.C. § 1331 and 28 U.S.C. § 1337(a), this Court has subject matter jurisdiction over this action, which seeks redress for violations of the federal antitrust laws, including Section 2 of the Sherman Act, 15 U.S.C. § 2. See also 15 U.S.C. § 26.
- 19. Pursuant to 15 U.S.C. § 22 and 28 U.S.C. § 1391, this Court has personal jurisdiction over Apple and venue is proper in this district. Apple is headquartered and found in this district, and a substantial part of the events or omissions giving rise to the claim occurred here.

IV. FACTUAL ALLEGATIONS

A. The Smartphone Market

- 20. The advent of the smartphone has reshaped the lives of most Americans as well as those of people around the globe. This action concerns the largest player in the domestic smartphone market, Apple, whose reach now extends far beyond consumer electronics and into how Americans communicate with their friends and families, manage their finances, shop, read the news, and much more.
- 21. Smartphones are mobile phones or "cell phones" that offer functionality far beyond a traditional telephone or basic mobile phone. Mobile phones enable communications over radio frequencies. transmitted by equipment covering distinct geographic areas, or "cells." The first commercial cell phones became available in the 1980s. Since then, improvements in both cell phone components and wireless technology have made it possible to transfer large volumes of data in a short period. Today, nearly every American adult owns at least one cell phone, as do many children.
- 22. Smartphones are platforms that combine calling with other features and services, from taking pictures to sending and receiving text messages and emails, browsing the internet, listening to music and other entertainment functions. Consumers choose between smartphones based, in part, on their functionality. Today, smartphone functionality is driven in large part, though not exclusively, by a combination of hardware and software components. Thus, in a competitive market, smartphone manufacturers would compete and innovate to provide the best functionality. Although many parts of the functionality of a smartphone could be replicated by combining different devices—e.g. carrying a laptop, camera, and simple mobile phone without smartphone functionality—consumers prefer access to the combination of functions in a single, portable device. By extension, a phone lacking the features of a smartphone is not a reasonable substitute, just as neither a phone nor a laptop is not, on its own, a reasonable substitute for a smartphone.
- 23. The hardware of a smartphone consists of a frame, screen, the semiconductor chipsets that run the smartphone—central processing of software instructions, graphics, video, display, memory, data storage—and antennas that connect to wireless networks. Higher-performing smartphones have frames and screens that are typically constructed from better materials like glass and

metal instead of plastic and are manufactured to higher standards that make them more durable. Chipsets that offer superior performance—faster processing and network connections, better graphics, and more storage—are costly. As a result, smartphone manufacturers typically include them only in more expensive, higher-performing smartphones.

- 24. Smartphones also include components like cameras, position and motion sensors, and several types of antennas. Performance smartphones typically have higher-quality cameras, better battery life, wireless charging, and advanced biometric capabilities such as face scanning. A smartphone's several antennae allow the phone to communicate using standard protocols such as WiFi, Bluetooth, and Near-Field Communications (NFC). WiFi is wireless networking technology that provides wireless high-speed internet access; Bluetooth is a wireless standard that allows smartphones to use shortwave radios to communicate with accessories like headphones and smartwatches; and NFC relies on short-range wireless technology to enable communications and information sharing with other NFC-enabled devices like credit card terminals, typically within 2-4 centimeters.
- 25. Smartphones also feature various software. The most important software for a smartphone is the operating system. The operating system is the software that manages both the hardware and other software on the smartphone. All iPhones are preloaded with Apple's proprietary, exclusive iPhone operating system called iOS. Software applications, known as "apps," are programs that perform specific tasks at the smartphone user's request, such as sending messages, playing music, or web browsing. Apps depend on a smartphone's operating system to function. Apps communicate with a smartphone's operating system through application programming interfaces (APIs). Apps that work only with a particular smartphone operating system are called native apps.
- 26. Middleware is software that provides similar APIs and functionality across a diverse set of operating systems and devices. This allows developers to create cross-platform applications without having to write separate code for individual operating systems or devices because developers can rely on the APIs exposed by the middleware rather than APIs that only work on specific operating systems or devices.
- 27. Apple has long understood how middleware can help promote competition and its myriad benefits, including increased innovation and output, by increasing scale and interoperability.

As Apple's then-Senior Vice President of Software Engineering testified during the government's landmark monopolization case in United States v. Microsoft: "Because we have created QuickTime for both Windows and Macintosh computers, developers can write a single version of a content product that will run on both Macintosh and Windows, without the additional expense of 'porting' the product to different operating systems."

- 28. In the context of smartphones, examples of middleware include internet browsers, internet or cloud-based apps, super apps, and smartwatches, among other products and services. While not meeting the technical definition of middleware, certain other products and services may nonetheless have the same economic impact as middleware, such as eliminating the added expense of porting a product or experience across hardware or operating systems. For the purposes of this complaint, middleware refers to both technical middleware and products and services that, while not technically middleware, have the same economic effect.
- 29. Smartphones are also platforms that bring together different groups. The value of a smartphone platform is increased for users when new apps and features are added to the platform. Increased value of the smartphone platform for users translates into increased value of the smartphone platform to the operator. To increase the value of the iPhone as a platform, Apple invited third-party developers to create context for the platform. Apple has willingly opened the platform to third-party developers to capture this value even though there is no extensive regulatory framework requiring it to do so or overseeing how it interacts with those third parties. Apple has benefitted enormously from the value that third-party developers added to its smartphone platform.
- 30. Smartphones are unique platforms, and distinct from platforms like traditional landline phone networks, as the value-added features of such networks were built by the platform operator and opened to third parties when required by regulation. When a third-party developer for the iPhone creates a valuable new feature, consumers benefit and consumer demand goes up for Apple's products, increasing the economic value of the iPhone to Apple. This has played out hundreds of thousands of times for the iPhone, resulting in an enormously valuable smartphone platform reflecting the combined contributions of millions of developers.

B. Apple's Reversal of Fortunes Built upon *US v. Microsoft* and Mobile Consumer Devices

- 31. Mobile consumer devices—and the iPhone in particular—have brought about a sea change in Apple's fortunes. Apple was founded 1976 as a personal computer company.
- 32. Apple struggled to compete in the personal computing market against Windows-based machines and was near bankruptcy by the late 1990s. Apple's entry into the market for mobile consumer devices came at this time—as Apple veered towards insolvency—and against the backdrop of the U.S. v. Microsoft case. *United States of America v. Microsoft Corporation*, 253 F.3d 34 (D.C. Cir. 2001).
- 33. In May 1998, the United States DOJ filed suit against Microsoft, joined by 20 state and district attorneys general.
- 34. In that action, the DOJ and attorneys general alleged that Microsoft had violated Section 2 of the Sherman Act by monopolizing the market for Intel-compatible personal computer operating systems. The government plaintiffs alleged, among other things, that Microsoft had undermined cross-platform technologies like QuickTime, a software architecture developed by Apple to play music, videos, and multimedia content.
- 35. At trial, the government successfully established that Microsoft took steps to undermine the competitive threats posed by middleware, such as web browsers like Netscape, after recognizing that if users could use middleware to access a variety of content and services via remote servers, over the internet, they might be less reliant on Windows. Apple's then-Senior Vice President of Software Engineering testified that Microsoft "[wrote] steps into its operating system to ensure that a QuickTime file will not operate reliably on Windows," "trick[ed] the user into believing that QuickTime technology is part of the problem actually caused by the Windows operating system," and "introduced greater technical incompatibilities between QuickTime and Microsoft products."
- 36. In April 2000, the trial court found that Microsoft's conduct violated Section 2 of the Sherman Act. An appeals court upheld the district court's findings of liability regarding middleware.
- 37. On November 1, 2002, the trial court accepted a proposed consent decree. Among other things, the consent decree prohibited Microsoft from retaliating against companies for developing or distributing products such as browsers and media players. The consent decree also required Microsoft

to make various APIs available to third-party developers, including Apple. The outcome of the US v. Microsoft case created openings that would be critical to the success of Apple's consumer devices, and by extension, the company itself.

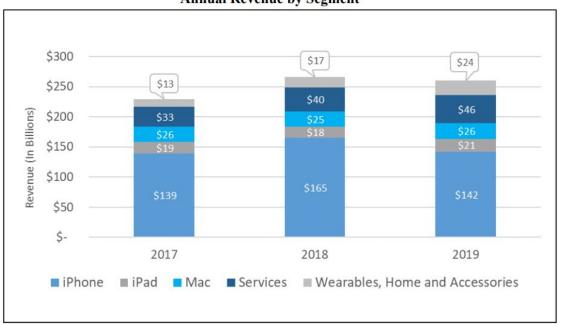
- 38. In January 2001, Apple introduced iTunes software, which was built on Apple's QuickTime architecture. The initial version of iTunes was only compatible with Apple's Mac computers.
- 39. iTunes initially was a media player and library—that is, it stored, organized, and played users' digital music files. Apple soon added functionality that included a store from which users could purchase and download digital media files, and functionality to manage mobile music players—specifically, Apple's iPod device.
- 40. Apple's development of a cross-platform version of iTunes for Microsoft's Windows operating system, the dominant personal computer operating system, was facilitated by the US v. Microsoft consent decree. In turn, this facilitated the widespread adoption of the iPod, and then ultimately the iPhone—devices whose interactions with users' personal computers were initially managed by the iTunes software.
- 41. Following that consent decree in October 2003, Apple launched a cross-platform version of iTunes that was compatible with the Windows operating system. As a result, a much larger group of users could finally use the iPod and iTunes, including the iTunes Store. The iTunes Store allowed users to buy and download music and play it on their iTunes computer application or the iPod.
- 42. Apple benefited substantially from this new customer base. In the first two years after launching the iPod, Apple sold a few hundred thousand devices. The year after launching a Windowscompatible version of iTunes and gaining access to millions more customers, Apple sold millions of devices. Apple went on to sell hundreds of millions of iPod devices over the next two decades. Moreover, iTunes became the market leader in online music services. At an event in 2007, Apple's then-CEO said of the iPod, "it didn't just change the way we all listened to music, it changed the entire music industry." At the same event, he announced that the company would change its name from Apple Computer, Inc. to Apple, Inc. reflecting its shifted focus from personal computers to a much wider range of consumer electronics, software, and services.

- 43. The success of the iPod, and iTunes on Windows-based machines, was built in part on the success of the U.S. v. Microsoft action. The success of the iPod and iTunes, in turn, drove the success of the iPhone and a reversal of fortune for Apple.
- 44. Apple introduced the first iPhone in January 2007. It marketed the iPhone as an easy-to-use device that combined "an iPod, a phone, and an internet communicator." Apple's then-CEO announced, "iTunes is going to sync all your media to your iPhone—but also a ton of data. Contacts, calendars, photos, notes, bookmarks, email accounts." The original iPhone cost approximately \$299—approximately \$450 in 2024 dollars adjusted for inflation—with a two-year contract with a phone carrier. At launch, nearly all native apps for the iPhone were created by Apple. There were only about a dozen apps overall.
- 45. The iPhone is the primary driver of Apple's growth and profit, making up a majority of its revenue annually since 2012. In 2022, the iPhone generated over \$205 billion for Apple, making up over 52% of the company's revenues. In 2023, that figure was \$201 billion, or 52% of total sales.
- 46. Apple's profit margin on the iPhone typically exceeds 30%. It reportedly costs Apple \$501 dollars to make an iPhone 14 Pro Max, which the company sells for a base price of \$1099. No other competitor can command a similar premium.
- 47. Apple's ecosystem—and the "services" segment—comprise a growing and critical driver of its revenue. Services are numerous and include advertising, AppleCare, iCloud, App Store, Arcade, Fitness+, Music, News+, TV+. Card, and Pay. For example, Apple offers iPhone upgrades, apps and in-app payments, and paid digital subscription services (e.g., Apple's music streaming, TV, news, gaming, fitness, and cloud storage subscriptions).
- 48. In 2019, the House Judiciary Committee, led by the Subcommittee on Antitrust,
 Commercial and Administrative Law, announced an investigation into competition in digital markets.
 The resulting Majority Staff Report, published in 2020, noted:
 - "Apple's monopoly power over software distribution on iOS devices appears to allow it to generate supranormal profits from the App Store and its Services business. Apple CEO Tim Cook set a goal in 2017 to rapidly double the size of the Services business by the end of 2020. Apple met this goal by July 2020, six months ahead of schedule. The Services business

accounted for nearly 18% of total revenue in Fiscal Year 2019, about \$46.2 billion. Services grew faster than Products in recent years, increasing by more than 41% since 2017. The Services category is also Apple's highest margin business at 63.7% in Fiscal Year 2019 and 67.2% for the quarter ending in June 2020."

49. The House Majority Staff Report showed the following:

Annual Revenue by Segment²¹²²



- 50. Since the publication of the House Report, Apple's "Services" segment has continued to grow. Moreover, while products constituted 78% of Apple's total sales, services accounted for the remaining 22%. Services represented 19% of Apple's revenue in the latest fiscal quarter, posting sales growth of 11.3% on a year-over-year basis—faster than the products division, where sales were essentially flat.
- 51. Not only has the Services segment expanded rapidly, but it also carries a gross margin of 71-72% much higher than the devices, whose margin is approximately 37%. This is due to these offerings being digital rather than physical, and thus having low marginal costs. Apple's software and subscriptions make the products much more valuable.

¹ U.S. H.R., Subcomm. on Antitrust, Com. & Admin. Law of the Comm. on the Judiciary, *Investigation of Competition in Digit. Mkts.*, 336 (2020), https://democrats-judiciary.house.gov/uploadedfiles/competition in digital markets.pdf.

- 52. Besides driving growth and improved profitability for the enterprise, services support Apple's ecosystem strategy, driving "stickiness" and customer loyalty. Apple increasingly extracts revenue from iPhone users beyond the initial smartphone sale.
- 53. After launching the iPhone, Apple began stifling the development of cross-platform technologies, just as Microsoft tried to stifle cross-platform technologies on Windows. Apple feared that disintermediation of its platform and the commoditization of the iPhone would threaten Apple's substantial profits from iPhone sales and related revenue streams.

C. Apple Leveraged its Role as Intermediary

- 54. Within a year of launching the iPhone, Apple invited third-party developers to create native apps for the iPhone and released its first software development kit, the digital tools for building native apps on Apple's operating system (iOS). Apple also offered developers ways to earn money by selling apps and, later, in-app purchases and subscriptions. Apple thereby encouraged and enabled third-party developers to create native apps for the iPhone.
- 55. Apple's decision to invite third-party participation onto its iPhone platform benefited Apple as third-party apps generated billions of dollars in profits for Apple. Third-party apps also helped build the iPhone user base of more than 250 million devices in the United States, enhancing the value of the iPhone platform. By 2009, Apple was running marketing campaigns highlighting the value that third-party apps provide to iPhone users with the trademarked slogan: "There's an app for that."
- 56. At the same time as it profited from third-party app development, Apple executives understood that third-party products and services can, in their own words, be "fundamentally disruptive" to its smartphone monopoly, decreasing users' dependence on Apple and the iPhone and increasing competitive pressure on Apple. Apple therefore undertook several steps to control the risk that third-party products and services posed to its monopoly, to lock users into the Apple ecosystem and enhance its "stickiness," and to extract monopoly rents from both users and third-party developers:
 - A. First, Apple exercises its control over app distribution and app creation to dictate how developers innovate for the iPhone, enforcing rules and contractual restrictions to prevent innovation that might threaten its monopoly power;

- B. Second, Apple uses its control over the iPhone ecosystem to keep users away from products and services that would facilitate switching away from its products;
- C. Third, Apple uses its monopoly power to extract rents from both users and third-party developers. Concerning users, Apple generates extraordinary profits through subscription services (like Apple's proprietary music, gaming, cloud storage, and news services), and accessories like headphones and smartwatches. Concerning third-party developers, Apple imposes fees and revenue-sharing requirements that have been enormously profitable for it. For most of the last 15 years, Apple collected a tax in the form of a 30 percent commission on the price of any app downloaded from the App Store, a 30 percent tax on in-app purchases, and fees to access the tools needed to develop iPhone native apps. While Apple has reduced the tax it collects from a subset of developers, Apple still extracts 30 percent from many app makers while also generating substantial revenue by charging developers to help users find their apps in the App Store.
- 57. Apple controls the distribution and creation of third-party apps for the iPhone in several ways.

Apple's Ecosystem: Hardware, Software Infrastructure, Apple & Third-Party Apps²⁰⁸⁷



- 58. Initially, Apple limits the distribution of native iPhone apps to its own Apple App Store. A user can only download, and a developer can only distribute, native iOS apps through the App Store. By these limits, Apple controls the apps available to users and exerts monopoly power over developers by imposing contractual restrictions and rules that limit the behavior of non-Apple apps and services. Apple sets the conditions for apps it allows through its App Store Review Guidelines, which give Apple sole discretion to review and approve all apps and app updates. Apple exercises that discretion to its benefit, deviating from or changing its guidelines when it suits Apple's interests, including by allowing it to control app reviews and decide whether to approve individual apps or updates. Apple uses App Store rules and restrictions to penalize developers who take advantage of technologies that threaten to disrupt, disintermediate, compete with, or erode Apple's monopoly power.
- 59. Apple also controls app creation through the APIs that it chooses to make available to developers. Developers cannot provide native apps on the iPhone unless they enter into Apple's nonnegotiable Developer Program License Agreement (DPLA), which requires developers to use public APIs only "in the manner prescribed by Apple" and prohibits third-party apps from using APIs that Apple designates as "private." Apple designates APIs as public or private to benefit Apple, limiting the functionality that third-party developers can offer to iPhone users even when the same functionality is available in Apple's apps, or even select third-party apps. Similar to Apple's App Store restrictions, Apple uses its DPLA to impose, penalize and restrict developers that take advantage of technologies that threaten to disrupt, disintermediate, or erode Apple's monopoly power.
- 60. Developers cannot successfully avoid Apple's control of app distribution and app creation by making web apps—apps created using standard programming languages for web-based content and available over the internet—as an alternative to native apps. Many iPhone users do not look for or know how to find web apps, and as a result, web apps constitute only a small fraction of app usage. Apple recognizes that web apps are not a good alternative to native apps for developers. As one Apple executive acknowledged, "[d]evelopers can't make much money on the web." Even so, Apple can still control the functionality of web apps because Apple requires all web browsers on the iPhone to use WebKit, Apple's browser engine—the key software components that third-party browsers use to display web content.

profit from its existing customers through subscriptions, advertising, and cloud services. These

services increase the cost of switching from the iPhone to another smartphone because many of these

Apple ecosystem, causing significant friction for iPhone users who try to switch to or use alternative

services on another smartphone. Moreover, Apple's conduct demonstrates that Apple recognizes the

importance of digital products and services for the success of the iPhone while at the same time it

restricted the development and growth of non-iPhone products and services—especially those that

services—including its proprietary gaming, cloud storage, and news service—are exclusive to the

While controlling app distribution and app creation, Apple extracted more revenue and

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62. Apple exercised its control of app creation and app distribution to cement the iPhone and App Store as the primary gateway to apps, products, and services. Apple often claims these rules and restrictions are necessary to protect user privacy or security, but Apple's documents tell a different story, as the federal and state complaint alleges. In reality, Apple imposes certain restrictions to benefit its bottom line by thwarting direct and disruptive competition for its iPhone platform fees and/or for the importance of the iPhone platform itself.

D. Apple Unlawfully Monopolized and Maintained Monopoly Power

might make it easier for users to switch from the iPhone to another smartphone.

63. Apple's monopoly maintenance has taken many forms and continues to evolve today; however, Apple's anticompetitive and exclusionary course of conduct is exemplified by its contractual rules and restrictions targeting several products and services: super apps, cloud streaming apps, messaging apps, smartwatches, and digital wallets. By stifling these technologies, and many others, Apple reinforces its smartphone monopoly, not by making its products more attractive to users, but by discouraging innovation that threatens its monopoly or the disintermediation of the iPhone platform. Apple continues to expand and shift the scope and categories of anticompetitive conduct such that the cumulative anticompetitive effect of **Apple's** conduct is even more powerful than that of each exclusionary act standing alone.

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1. Through its Monopolization of App Distribution and Control over the App Store, Apple Stifles Competition Through Contractual Restrictions and Fees

a. Super Apps

- 64. A super app is a mobile or web application that can combine multiple services into one platform. A super app might include social networking, e-commerce, banking, messaging, food delivery, transportation features or other mini apps that users can activate as needed. In addition to the functionality of each modular mini app or micro app, the super app has a functionality of its own.

 Users can perform multiple disparate tasks in one app instead of using multiple separate apps. In short, a super app is an application that builds upon its core functionality to mix different services into one place.
- of content and services without downloading and accessing multiple apps. Super apps can provide a consistent user experience that can be transferred across devices, thereby facilitating smartphone competition by making it easier for users to switch away from iPhone. As users interact with a super app, they rely less on the smartphone's proprietary software and more on the app itself. Eventually, users become more willing to choose a different smartphone because they can access the same interface, apps, and content they desire on any smartphone where the super app is also present.
- 66. A super app can also serve as a platform for smaller "mini" programs developed using programming languages. By using programming languages standard to most web pages, mini programs can function across platforms, meaning they work the same on any web browser and any device. Developers can therefore write a single mini program that works whether users have an iPhone or another smartphone.
- 67. Super apps also therefore reduce user dependence on the iPhone, including the iOS operating system and Apple's App Store, because a super app is a kind of middleware that can host apps, services, and experiences without requiring developers to use the iPhone's APIs or code. Developers can write mini programs that run on the super app without having to write separate apps for iPhones and other smartphones. This lowers barriers to entry for smartphone rivals, decreases Apple's control over third-party developers, and reduces switching costs.

68. For example, super apps like WeChat or Alipay are widely used in China. WeChat has several different functions, such as communicating, reading news, payment, accessing government resources and more. If a user switches from an iPhone to a different phone, they can just download and log into their super apps, and thereby switch over most of their app functionality with little difficulty. In the United States and the rest of the world, however, there are, effectively, no super apps because of Apple's ban on them.

- 69. Apple saw that, when a super app offers popular mini programs, iOS stickiness goes down, and its monopoly is threatened. As one Apple manager put it, allowing super apps to become "the main gateway where people play games, book a car, make payments, etc." would "let the barbarians in at the gate." Why? Because when a super app offers popular mini programs, "iOS stickiness goes down."
- 70. Apple blocked access to super apps because it viewed them as "fundamentally disruptive" to "existing app distribution and development paradigms," and ultimately to Apple's monopoly power. Apple feared super apps because it recognized that as they became popular, "demand for iPhone is reduced."
- 71. Apple recognizes that super apps with mini programs would threaten its monopoly. In one presentation to the board of directors, Apple highlighted the "[u]ndifferentiated user experience on [a] super platform" as a "major headwind" to growing iPhone sales in countries with popular super apps due to the "[1]ow stickiness" and "[1]ow switching cost." Maintaining stickiness, in effect, is "…all about the switching costs."
- 72. So Apple exerted its control over app distribution to block apps from hosting mini programs. Through App Store Guidelines, Apple disincentivized investments in mini program development and caused U.S. companies to abandon or limit support for the technology in the United States.
- 73. Since at least 2017, Apple has arbitrarily imposed exclusionary requirements that unnecessarily and unjustifiably restrict mini programs and super apps. For example, Apple required apps in the United States to display mini programs using a flat, text-only list of mini programs. Apple also banned displaying mini programs with icons or tiles, such as descriptive pictures of the content or

service offered by the mini program. Apple also banned apps from categorizing mini programs, such as by displaying recently played games or more games by the same developer. These restrictions discourage developers from creating apps and other content that would be attractive to iPhone users.

74. Apple also selectively enforced its contractual rules with developers to prevent developers from monetizing mini programs. For example, Apple blocked mini programs from accessing the APIs needed to implement Apple's in-app payment (IAP) system. Similarly, Apple blocked developers' ability to use in-app payment methods other than Apple's IAP. For instance, super apps could create a virtual currency for consumers to use in mini programs, but Apple blocked this too. Apple, however, allows other apps that are less threatening to its market dominance to do so.

b. Cloud Streaming Apps

- 75. Cloud steaming apps allow users to play computing-intensive games and access other content without having to process or store the program on the smartphone itself. Cloud streaming games thereby decrease the importance of expensive hardware to play games. That is, instead of needing expensive hardware to play high-compute tasks on a smartphone, a user's smartphone leverages the computing power of a remote server, which runs the program and streams the result back to the phone. As a result, users with access to cloud-streamed games may be more willing to switch from an iPhone to a smartphone with less expensive hardware because both smartphones can run desirable games or other apps equally well.
- 76. Cloud streaming games and apps therefore threatened Apple's revenue. So Apple wielded its power over app distribution to effectively prevent third-party developers from offering cloud gaming subscription services as a native app on the iPhone. Even today, none are currently available on the iPhone, even as cloud streaming services have become popular on other platforms.
- 77. For years, Apple imposed the onerous requirement that any cloud streaming game—or any update to a cloud streaming game—be submitted as a stand-alone app for approval by Apple. Having to submit individual cloud streaming games for review by Apple increased the cost of releasing games on the iPhone and limited the number of games a developer could make available to iPhone users. For example, the highest quality games, referred to as AAA games, typically require daily or even hourly updates across different platforms. If these updates need to be individually approved by

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Apple, developers must either delay their software updates across all platforms or only update their games on non-iOS platforms, potentially making the iOS version of the game incompatible with other versions on other platforms until Apple approves the update. Neither option is tenable for players or developers. Until recently, Apple would have required users to download cloud streaming software separately for each individual game, install identical app updates for each game individually, and make repeated trips to Apple's App Store to find and download games. Apple's conduct made cloud streaming apps so unattractive to users that no developer designed one for the iPhone.

- 78. Apple undermines cloud gaming apps in other ways too, such as by requiring cloud games to use Apple's proprietary payment system and necessitating game overhauls and payment redesigns specifically for the iPhone. Apple's rules and restrictions effectively force developers to create a separate iOS-specific version of their app instead of creating a single cloud-based version that is compatible with several operating systems, including iOS. As a result, developers expend considerable time and resources re-engineering apps to bring cross-platform apps like multiplayer games to the iPhone.
- 79. Apple's interference with cloud gaming apps prevented users from accessing desirable apps and content without needing to pay for expensive Apple hardware. Cloud streaming apps—not just gaming apps—could force Apple to compete more vigorously against rivals. As one Apple manager recognized, cloud streaming eliminates "a big reason for high-performance local compute" and thus eliminates one of the iPhone's advantages over other smartphones because then "all that matters is who has the cheapest hardware." Accordingly, it reduces the need for users to buy expensive phones with advanced hardware. This problem does not "stop at high-end gaming," but applies to "a number of high-compute requirement applications." In Apple's own words, it feared a world where "all that matters is who has the cheapest hardware" and consumers could "buy[] a [expletive] Android for 25 bux at a garage sale and . . . have a solid cloud computing device" that "works fine."
- 80. At the same time, Apple also made other smartphones worse by stifling the growth of these cross-platform apps on other smartphones. Importantly, Apple prevented the emergence of technologies that could lower the price that consumers pay for iPhones.

c. Messaging Apps

- 81. Messaging apps allow users to communicate with others. They are often the primary way that smartphone users communicate through their devices. In Apple's own words, messaging apps are "a central artery through which the full range of customer experience flows."
- 82. Smartphone messaging apps operate using protocols that enable communication and determine the features available via messaging apps. One important protocol used by messaging apps is Short Message Service or SMS. SMS offers a broad user network, but limited functionality. For example, all mobile phones can receive SMS messages, but SMS does not support modern messaging features, such as large files, edited messages, or reactions like a "thumbs up" or a "heart."
- 83. Because of the importance of messaging apps, Apple has undermined cross-platform messaging on the iPhone. Apple makes third-party messaging apps on the iPhone worse generally and compared to its messaging app (Apple Messages), by prohibiting third-party apps from sending or receiving carrier-based messages. Apple degrades the quality, privacy and security of these apps for its users and others without iPhones. Apple also undermines the quality of messaging with rival smartphones, to undermine their quality and reinforce its monopoly.
- 84. Many third-party messaging apps—such as WhatsApp, Facebook Messenger, and Signal—offer more secure and advanced features such as encryption, typing indicators, read receipts, the ability to share rich media, and disappearing or ephemeral messages. These messaging apps use proprietary, internet-based protocols, which are sometimes referred to as OTT ("over the top") protocols. While all mobile phones can send and receive SMS messages, OTT only works between users who communicate through the same messaging app.
- 85. Apple designates the APIs needed to implement SMS as "private," meaning third-party developers have no technical means of accessing them and are prohibited from doing so under Apple's contractual agreements with developers. As a result, third-party messaging apps cannot combine the "text to anyone" functionality of SMS with the advanced features of OTT messaging. Instead, if a user wants to send somebody a message in a third-party messaging app, they must first confirm whether the person they want to talk to has the same messaging app and, if not, convince that person to download and use a new messaging app. By contrast, if an Apple Messages user wants to send somebody a

message, they just type their phone number into the "To:" field and send the message because Apple Messages incorporates SMS and OTT messaging.

- 86. As another example, Apple prohibits third-party iPhone apps from sending or receiving SMS text messages even though this is standard functionality—forcing users to use Apple Messages. Likewise, Apple can control the functionality of third-party apps and accessories through its control of app distribution because if an app includes functionality that Apple does not like, or that is provided by one of Apple's native apps, Apple can and does exercise its discretion to simply block the app from the App Store.
- 87. Apple also prohibits third-party developers from incorporating other important features into their messaging apps as well. For example, third-party messaging apps cannot continue operating in the background when the app is closed, which impairs functionality like message delivery confirmation. And when users receive video calls, third-party messaging apps cannot access the iPhone camera to allow users to preview their appearance on video before answering a call, while Apple Messages incorporates these features.
- 88. If third-party messaging apps could incorporate these features, they would be more valuable and attractive to users, and the iPhone would be more valuable to Apple in the short term. For example, by incorporating SMS, users would avoid the hassle of convincing someone to download a separate app before sending them a message. Third-party messaging apps could also offer the ability to schedule SMS messages to be sent in the future, suggest replies, and support robust multi-device use on smartphones, tablets, and computers—as they have already done on the competing Android platform.
- 89. Messaging apps benefit from significant network effects—as more people use the app, there are more people to communicate with through the app, which makes the app more valuable and in turn attracts even more users. Incorporating SMS would help third-party messaging apps grow their network and attract more users. Instead, Apple limits the reach of third-party messaging apps and reinforces only those network effects that benefit Apple.
- 90. Apple undermines cross-platform messaging to reinforce "obstacle[s] to iPhone families giving their kids Android phones." Apple could have made a better cross-platform messaging

experience itself by creating iMessage for Android but concluded that doing so "will hurt us more than help us."

- 91. Apple has stated that it plans to incorporate more advanced features for cross-platform messaging in Apple Messages by adopting a 2019 version of the RCS protocol (which combines aspects of SMS and OTT). Apple has not done so yet, and doing so would not cure Apple's efforts to undermine third-party messaging apps anyway, because third-party messaging apps will still be prohibited from incorporating RCS on iPhone just as they are now prohibited from incorporating SMS. Moreover, the RCS standard will continue to improve over time, and if Apple does not support later versions of RCS, cross-platform messaging using RCS could soon be broken on iPhones anyway.
- 92. In addition to degrading the quality of third-party messaging apps, Apple affirmatively undermines the quality of rival smartphones.
- 93. A well-known example is Apple's sabotage of Android phones via the "green bubble" problem. If an Android user sends a text message to an iPhone, the message appears in a green bubble, as opposed to the blue bubble in which messages from an iPhone user appear. More significantly, within those green bubbles, iPhone users cannot receive high quality video or emojis from Android users, because Apple will not allow Android phones to use its richer and more secure system for sending messages. Apple has even attempted to destroy messaging firms like Beeper that try to innovate and create cross-messaging compatibility.
- 94. If an iPhone user messages or receives a message from a non-iPhone user in Apple Messages—the default messaging app on an iPhone—then the text appears to the iPhone user as a green bubble and incorporates limited functionality: the conversation is not encrypted, videos are pixelated and grainy, and users cannot edit messages or see typing indicators. This signals to users that rival smartphones are of lower quality because the experience of messaging friends and family who do not own iPhones is worse than when exchanging messages with other iPhone users. The only reason this experience is worse is that Apple has chosen to make it worse.
- 95. The reason for this, again, is to stop switching by raising the costs of doing so. In 2013, an Apple executive explained that supporting compatible messaging "would simply serve to remove [an] obstacle to iPhone families giving their kids Android phones." In 2022, Apple's CEO Tim Cook

was asked whether Apple would fix iPhone-to- Android messaging. "It's tough," the questioner implored Mr. Cook, "not to make it personal but I can't send my mom certain videos." Mr. Cook's response? "Buy your mom an iPhone."

96. Recently, Apple blocked a third-party developer from fixing the broken cross-platform messaging experience in Apple Messages and providing end-to-end encryption for messages between Apple Messages and Android users. By rejecting solutions that would allow for cross-platform encryption, Apple continues to make iPhone users' less secure than they could otherwise be.

d. Smartwatches.

- 97. Smartwatches are expensive accessories that permit the user, through an interactive display and apps, to perform many functions that might otherwise be performed by a smartphone, such as viewing messages and notifications, making mobile payments, and monitoring health information.
- 98. Smartwatches generally need to be paired with a smartphone to be fully functional.

 Because of the significant cost of buying a smartwatch, users are less willing to choose a smartphone if it is not compatible with their smartwatch.
- 99. Smartwatches that can pair with different smartphones allow users to retain investment in the accessory when switching phones, which decreases the cost associated with switching from one smartphone system to another. Apple's smartwatch—Apple Watch—is only compatible with the iPhone. If Apple can steer an iPhone user towards buying an Apple Watch, it becomes more costly for that user to purchase a different kind of smartphone because doing so requires the user to abandon their costly Apple Watch.
- 100. Cross-platform smartwatches could reduce iPhone users' dependence on Apple's proprietary hardware and software. If a user purchases a third-party smartwatch that is compatible with the iPhone and other smartphones, they can switch from the iPhone to another smartphone (or vice versa) by simply downloading the companion app on their new phone and connecting to their smartwatch via Bluetooth. Moreover, as users interact with a smartwatch, e.g., by accessing apps from their smartwatch instead of their smartphone, users rely less on a smartphone's proprietary software and more on the smartwatch itself. This also makes it easier for users to switch from an iPhone to a different smartphone.

- 101. Apple recognizes that driving users to purchase an Apple Watch, rather than a cross-platform smartwatch, helps drive iPhone sales and reinforce user retention in its monopolistic ecosystem. For example, in a 2019 email, the Vice President of Product Marketing for Apple Watch acknowledged that Apple Watch "may help prevent iPhone customers from switching."
- 102. Surveys have reached similar conclusions: many users say the other devices linked to their iPhone are the reason they do not switch to Android. Apple also recognizes that making Apple Watch compatible with Android would "remove [an] iPhone differentiator."
- 103. Apple suppresses third-party smartwatches and the competition they represent. Apple interferes with the ability of third-party smartwatches to respond to notifications and messages, interferes with third-party smartwatches maintaining consistent iPhone connection, and undermines the performance of third-party smartwatches that connect directly with a cellular network. In short, Apple uses its control of the iPhone, including its technical and contractual control of critical APIs, to degrade the functionality of third-party cross-platform smartwatches in three major ways.
- respond to message notifications. The ability to respond to notifications, e.g., new messages or app alerts, directly from a smartwatch is one of the top considerations for smartwatch purchasers, and one of the most used product features when it is available. According to Apple's market research, the ability to "[s]end and receive text messages from social and messaging apps" is a critical feature for a smartwatch. In 2013, when Apple started offering users the ability to connect their iPhones with third-party smartwatches, Apple provided third-party smartwatch developers with access to various APIs related to the Apple Notification Center Service, Calendar, Contacts, and Geolocation. The following year, Apple introduced the Apple Watch and began limiting third-party access to new and improved APIs for smartwatch functionality. For example, Apple now prevents third-party smartwatches from accessing APIs related to more advanced Actionable Notifications, so iPhone users cannot respond to notifications using a third-party smartwatch. Instead, Apple provides third-party smartwatches access to more limited APIs that do not allow users to respond to a message, accept a calendar invite, or take other actions available on Apple Watch.

105. Second, Apple interferes with the ability of third-party smartwatches to maintain a consistent connection. A reliable Bluetooth connection is essential for a smartwatch to connect wirelessly with a smartphone, and thereby function as a companion to the user's smartphone and unlock its full functionality. But Apple prohibits third-party smartwatch developers from maintaining a connection even if a user accidentally turns off Bluetooth in the iPhone's control center. Apple gives its own Apple Watch that functionality, however, because Apple recognizes that users frequently disable Bluetooth on their iPhone without realizing that doing so disconnects their watch. As a result, iPhone users have a worse experience when they try to use a third-party smartwatch with their iPhone. Apple also requires users to turn on "Background App Refresh" and disable the battery-saving "Low Power Mode" in their iPhone settings for third-party smartwatches to remain consistently connected to their companion app, which is necessary to allow a user's iPhone and their smartwatch to update and share data about the weather or exercise tracking, even though Apple does not impose similar requirements for Apple Watch.

106. Third, Apple degrades the functionality of cross-platform smartwatches that connect directly to a cellular network. Cellular-enabled smartwatches incorporate the ability to connect directly to a cellular network, allowing users to make calls, send messages, and download data even if their smartwatch is not paired with a smartphone. Apple Watch users can use the same phone number for their smartphone and smartwatch when connected to the cellular network. As a result, messages are delivered to both the user's smartphone and smartwatch, providing an integrated messaging experience. Although it is technologically feasible for Apple to allow an iPhone user with a third-party smartwatch to do the same, Apple instead requires these users to disable Apple's iMessage service on the iPhone to use the same phone number for both devices. This is a non-starter for most iPhone users. In practice, iPhone users with a third-party smartwatch must maintain separate phone numbers for the two devices, worsening their user experience, and may miss out on receiving messages sent to their primary iPhone number.

107. Apple's interference with third-party smartwatches harms users by denying them access to smartwatch competitors to the Apple product, which may be preferred by users for a variety of reasons, including style, battery performance, interface, services, or other features.

e. Digital Wallets.

- 108. A digital wallet (or electronic wallet) is an application that securely stores payment information and passwords. For example, digital wallets allow users to make in-person payments by tapping their device on a payment terminal rather than tapping or swiping a physical credit card. Digital wallets can also be used for transactions in mobile apps and mobile websites. Digital wallets are not limited to payments, however, as they allow a user to store and use passes and credentials, including credit cards, personal identification, movie tickets, and car keys.
- 109. Apple Wallet is Apple's proprietary digital wallet on the iPhone. Apple Wallet incorporates Apple's proprietary payment system Apple Pay, which processes digital payments on the web, in apps, and at merchant points of sale.
- 110. As of 2022, 89 percent of Americans have used at least one form of digital payment, and over two-thirds expect to have a digital wallet within two years, according to a study by McKinsey & Company. Apple recognizes that paying for products and services with a digital wallet will eventually become "something people do every day of their lives."
- Apple envisions that Apple Wallet will ultimately supplant multiple functions of physical wallets to become a single app for shopping, digital keys, transit, identification, travel, entertainment, and more. As users rely on Apple Wallet for payments and beyond, it "drive[s] more sales of iPhone and increase[s] stickiness to the Apple ecosystem" because Apple Wallet is only available on the iPhone. Thus, switching to a different smartphone requires leaving behind the familiarity of an everyday app, setting up a new digital wallet, and potentially losing access to certain credentials and personal data stored in Apple Wallet.
- 112. Apple has used its control over app creation, including its technical and contractual control over API access, to effectively block third-party developers from creating digital wallets on the iPhone with tap-to-pay functionality, which is an important feature of smartphone digital wallets. As a result, Apple maintains complete control over how users make tap-to-pay payments with their iPhone. Apple also deprives users of the benefits and innovations third-party wallets would provide so that it can protect Apple's most important and successful business: iPhone.

- 113. Over \$200 billion of transactions were done via "tap to pay" in 2022 alone, according to the Consumer Financial Protection Bureau. The tap-to-pay feature uses a standard near-field communication (NFC) chip, but Apple Pay is the only app on the iPhone allowed to use tap-to-pay. While Apple actively encourages banks, merchants, and other parties to participate in Apple Wallet, Apple simultaneously exerts its smartphone monopoly to block these same partners from developing better payment products and services for iPhone users. Apple uses its control over app creation and API access to selectively prohibit developers from accessing the NFC hardware needed to provide tap-to-pay through a digital wallet app.
- 114. Multiple app developers have sought direct NFC access for their payment or wallet apps. Yet Apple prohibits these developers from incorporating tap-to-pay functionality in their apps for fear that doing so would "be one way to disable [A]pple [P]ay trivially," leading to the "proliferation of other payment apps" that might operate cross-platform and ultimately undermine Apple's smartphone monopoly.
- 115. There is no technical limitation on providing NFC access to developers seeking to offer third-party wallets. For example, Apple allows merchants to use the iPhone's NFC antenna to *accept* tap-to-pay payments from others. Apple also acknowledges it is technically feasible to enable an iPhone user to set another app (e.g., a bank's app) as the default payment app, and Apple intends to allow this functionality in Europe.
- payment (IAP). This prevents these wallets from increasing their attractiveness and improving the overall user experience on the iPhone by offering consumer experiences that may include the use of rewards points in purchasing, digital receipts, returns, loyalty programs, and digital coupons for purchases of relevant subscriptions and digital goods. Apple even prohibits developers on its App Store from notifying users in the developer's app that cheaper prices for services are available using alternative digital wallets or direct payments. Absent Apple's conduct, cross-platform digital wallets could be used to manage and pay for subscriptions and in-app purchases.
- 117. Apple also impedes the adoption of digital wallets by restricting others from offering the same ability to authenticate digital payment options on online checkout pages. By limiting the

ability of third-party wallets to provide a simple, fast, and comprehensive solution to online purchasing, Apple further undermines the viability of such wallets.

- 118. Apple also uses its smartphone monopoly to extract payments from banks, which need to access customers who use digital wallets on iPhones. Since Apple first launched Apple Pay—long before it achieved meaningful adoption—Apple has charged issuing banks 15 basis points (0.15 percent) for each credit card transaction mediated by Apple Pay. Payment apps from Samsung and Google are free to issuing banks. Apple's fees are a significant expense for issuing banks and cut into funding for features and benefits that banks might otherwise offer smartphone users. The volume of impacted transactions is large and growing. A U.S. Consumer Financial Protection Bureau report estimates that Apple Pay facilitated nearly \$200 billion in transactions in the United States in 2022. And the report goes on to explain that "analysts estimate that the value of digital wallet tap-to-pay transactions will grow by over 150 percent by 2028."
- 119. Cross-platform digital wallets would offer an easier, more seamless, and potentially more secure way for users to switch from the iPhone to another smartphone. For example, if third-party developers could create cross-platform wallets, users transitioning away from the iPhone could continue to use the same wallet, with the same cards, IDs, payment histories, peer-to-peer payment contacts, and other information, making it easier to switch smartphones. And because many users already use apps created by their preferred financial institutions, if these financial institutions offered digital wallets, then users would have access to new apps and technologies without needing to share their private financial data with additional third parties, including Apple. In the short term, these improved features would make the iPhone more attractive to users and profitable for Apple.

 Accordingly, the absence of cross-platform digital wallets with tap-to-pay capability on the iPhone makes it harder for iPhone users to purchase a different smartphone.
- 120. This exclusionary behavior is intentional, as "Apple envisions that Apple Wallet will ultimately supplant multiple functions of physical wallets to become a single app for shopping, digital keys, transit, identification, travel, entertainment, and more," and that it will contribute to the stickiness of the Apple ecosystem.

121. Apple's conduct reflects its knowing degradation of the experience of its users by blocking them from accessing wallets that would have better or different features. In so doing, Apple cements reliance on the iPhone and also imposes fees on a large and critical slice of all digital wallet NFC transactions, which the U.S. Consumer Financial Protection Bureau estimates will grow to \$451 billion by 2028.

2. Other Conduct by Apple to Protect and Grow its Monopoly

- 122. The acts described above are part of Apple's ongoing course of conduct to build and maintain its smartphone monopoly. They are not exclusive or exhaustive.
- 123. Apple has deployed a similar playbook for a much broader range of third-party apps and services as well, many of which present technologies that function as middleware, facilitate switching, reduce the need for expensive hardware, or disintermediate Apple's iPhone by enabling the development of cross-platform technologies.
- 124. For instance, Apple has undermined third-party location trackable devices that fully function across platforms. Apple has impaired third-party, cross-platform video communication apps while steering users to its video communication app, FaceTime.
- 125. Apple has limited the capabilities of third-party iOS web browsers, including by requiring that they use Apple's browser engine, WebKit.
- 126. Protocols that Apple has placed around new "eSIM" technology may introduce additional friction for any user who seeks to transition from an iPhone to a different phone while maintaining the same phone number.
- 127. Apple has impeded cross-platform cloud storage apps to steer iPhone users into iCloud, making data transfer between different devices more difficult.
- 128. Apple uses restrictions in sales channels to impede the sale and distribution of rival smartphones.
- 129. Apple has worsened its users' experience by making it difficult for iPhone users to use superior voice and AI assistants and steering users to use Siri as a voice assistant.
- 130. As technology evolves, Apple continues to evolve and shift its anticompetitive behavior to protect its monopoly power. For example, in recent years, Apple has increasingly moved into

offering its subscription services, including news, games, video, music, cloud storage, and fitness subscriptions that could be used to keep users tethered to the platform. These subscription services and other ancillary fees are a significant part of Apple's net revenue. These subscription services can also increase switching costs among iPhone users. If an Apple user can only access their subscription service on an iPhone, they may experience significant costs, time, lost content, and other frictions if they attempt to switch to a non-Apple smartphone or subscription service.

V. RELEVANT MARKETS AND MONOPOLY POWER

- 131. All smartphones compete against each other in a broad relevant market. But industry participants, including Apple, assess competition among smartphones in narrower markets that are best understood as submarkets of the larger all-smartphone market. Because Apple chooses not to compete to sell new smartphones in the entry-level tier, the most relevant market to assess its conduct is a narrower submarket that excludes this tier. Regardless of how the market is drawn, however, Apple's conduct is unlawful.
- 132. Performance smartphones are a narrower relevant product market within the broader smartphone market. This narrower market includes those smartphones that compete with most iPhones and excludes the lowest-end smartphones, which industry participants sometimes refer to as "entry-level" smartphones.
 - A. Industry participants recognize performance smartphones as distinct and frequently group smartphones into tiers that include entry-level smartphones and higher tiers such as "premium" or "flagship."
 - B. Apple has also long recognized a distinction between these higher-end smartphones and lower-end, entry-level smartphones. Apple's documents indicate it does not view entry-level smartphones as competing with the iPhone and other performance smartphones.
 - C. Performance smartphones have distinct characteristics and uses as compared to other smartphones. For example, entry-level smartphones are generally made with lower-quality materials and are less durable (e.g., plastic instead of metal and glass). They have lower performance components such as slower processors and lower-capacity storage, which prevent

users from running more intensive applications or storing large volumes of pictures and data on the device. Entry-level smartphones often lack features such as an NFC antenna that allows consumers to use their phones to make payments or access passes for public transit.

- D. Consumers typically purchase performance smartphones under different terms than entry-level smartphones. Consumers generally use entry-level smartphones along with prepaid service plans. By contrast, consumers usually purchase performance smartphones for use with post-paid service plans that include promotional discounts to consumers who purchase performance smartphones.
- E. Because of these differences, among others, between entry-level smartphones and performance smartphones, entry-level smartphones are not reasonable substitutes for performance smartphones.
- F. Moreover, competition from non-performance smartphones is not sufficient today to prevent Apple from exercising monopoly power in the performance smartphone market.
- 133. Smartphones are a relevant product market. Smartphones are distinct from phones that offer less capable hardware and software options than smartphones.
 - A. These other phones, sometimes called "feature phones," may offer basic web browsing in addition to calling and messaging options, but do not offer the breadth of access to the internet or third-party apps as smartphones. Similarly, these phones often have lower-quality hardware, such as poorer displays, and less capable cameras, and rely on physical keyboards instead of smartphone touch screens. Thus, these phones are not reasonable substitutes for smartphones.
 - B. Smartphones are also distinct from other portable devices, such as tablets, smartwatches, and laptop computers. These devices lack the combination of function, size, and portability that consumers rely on in a smartphone, even if they offer some similar capabilities. Thus, none of these other products are reasonable substitutes for smartphones.
 - C. Apple, other participants in the market, and the public recognize that smartphones are distinct from feature phones and other portable devices.

D. Competition from feature phones, or other alternatives, is not sufficient to prevent Apple from exercising monopoly power in the smartphone market."

- 134. The United States is a relevant geographic market for the sale of performance smartphones and smartphones. Users in the United States demand services offered by U.S. retailers when they purchase a smartphone. For example, consumers who purchase a smartphone from their mobile carrier can get assistance with activating their new device, setting it up, and transferring important content like apps, messages, photos, and videos to their new smartphone. A smartphone purchased abroad for use in the United States might be incompatible with the consumer's domestic carrier, may not have the necessary radio technology to take advantage of the carrier's highest speed connections, the carrier might not be able to offer support during setup or subsequently, or the phone's warranty may be invalid.
 - A. Consumers must also purchase smartphones through a U.S. retailer if they want to take advantage of valuable promotions offered by their mobile carrier. These same promotions and free financing are unavailable to U.S. consumers who purchase their phones in other countries.
 - B. Finally, potential new smartphone entrants to the U.S. market must also comply with telecommunications regulations and satisfy other legal requirements. No extensive regulatory framework governs how Apple operates its platform concerning developers, but there are several regulatory requirements that must be met to enter the smartphone market. As a result, some smartphone makers are effectively barred from offering their smartphones to U.S. consumers.
 - C. Consumers in the United States could not avoid or defeat an increase in the price of performance smartphones or smartphones by purchasing and importing smartphones from abroad. This allows Apple to set prices for the same smartphone in the United States separately from those in other countries. For example, Apple lowered the price of the iPhone 11 in China relative to the United States because Apple faced greater competition in China. This additional competition arises in part because a popular super app put competitive pressure on Apple and made it easier for users to switch from an iPhone to a rival smartphone. As a result, Apple is

 unable to command the same prices for the iPhone in China as they do in the United States due to less competition.

- 135. Apple has monopoly power in the smartphone and performance smartphone markets because it has the power to control prices or exclude competition in each of them. Apple also enjoys substantial and durable market shares in these markets. Moreover, Apple's market shares likely underestimate Apple's power because they are protected by significant barriers to entry, network effects, and switching costs. Apple recognizes and exploits these barriers to entry, network effects, and switching costs to protect itself from competition from rival platforms and innovations, products, and services that may diminish consumer reliance on the iPhone. Apple's power will likely increase over time.
- 136. In the U.S. market for performance smartphones, where Apple views itself as competing, Apple estimates its market share exceeds 70 percent. These estimates likely understate Apple's market share today. For example, Apple's share among key demographics, including younger audiences and higher-income households, is even larger. Even in the broadest market consisting of all smartphones—including many smartphones that Apple and industry participants do not view as competing with Apple's iPhones and other higher-end phones— Apple's share is more than 65 percent by revenue. Similarly, even if consumers choose one phone over another, the vast majority of developers consider iPhones and Android devices as complements because developers must build apps that run on both platforms due to the lack of user multi-homing. In effect, the lack of multi-homing among users necessitates multi-homing among developers. This market reality increases the power that Apple can exercise over developers that seek to reach users on smartphones—especially performance smartphones that run sophisticated apps.
- 137. Apple's high market shares are durable. Over the last decade, Apple increased its share of smartphones sold in the United States most years. Through the same period, Apple collected more than half the revenue for all smartphones sold in the United States.
- 138. The market for smartphones is largely a market for replacements, as only 10% of buyers each year are buying their first smartphone. In the US, retention rates are high. According to one mobile carrier, 98% of iPhone users buy another iPhone. In comparison, in China, where Apple

competes for market share, the figure was just 50%. "The reason is simple. In America, it's difficult to move out of the Apple ecosystem. In China, it's easy."²

- 139. Apple's monopoly power in the relevant markets is protected by substantial barriers to entry and expansion. For example, since fewer than ten percent of smartphone purchasers in the United States are buying their first smartphone, there are fewer new customers available for Apple's rivals. Instead, rivals must encourage existing iPhone users to switch from using an iPhone to using another smartphone when they replace or upgrade their phone. As a result, switching costs—many created or exacerbated by Apple—impose substantial barriers to entry and expansion for rival smartphones. This barrier is increasingly impenetrable. Nearly 90 percent of iPhone owners in the United States replace their iPhone with another iPhone. At least one U.S. carrier estimates that, in any given quarter, as high as 98 percent of iPhone users on its network who replace or upgrade their iPhone do so by buying another iPhone. The increased switching costs that consumers experience because of Apple's conduct underpins these exceedingly high retention rates.
- 140. Apple's monopoly power in the relevant markets is protected by other barriers to entry, expansion, or repositioning as well. For example, introducing a new smartphone requires considerable investments in acquiring expensive and scarce components such as mobile chips and specialized glass for screens. Other significant barriers to entry include product design, software development, regulatory approval, manufacturing, marketing, and customer service. Because most smartphones are bought through mobile carriers, new entrants or those seeking to expand or reposition must meet the carriers' technical requirements to access the major carrier networks in the United States. New entrants and smaller rivals must also negotiate distribution agreements and persuade carriers and other retailers to promote their products to consumers. As explained above, rival smartphones must also overcome the substantial network effects generated by interactions between users, developers, and others who interact with the iPhone.
- 141. Apple's iPhone platform is protected by several additional barriers to entry and expansion, including strong network and scale effects and high switching costs and frictions. For

² Matt Stoller, *Why the Apple Antitrust Suit Matters*, The Big Newsletter (Mar. 22, 2024), https://www.thebignewsletter.com/p/why-the-apple-antitrust-suit-matters.

example, if an iPhone user wants to buy an Android smartphone, they are likely to face significant financial, technological, and behavioral obstacles to switching. The user may need to re-learn how to operate their smartphone using a new interface, transfer large amounts of data (such as their contacts), purchase new apps, or transfer or buy new subscriptions and accessories. These switching costs and frictions are even higher when software applications, APIs, and other functionality make it more difficult for the different devices and operating systems to communicate and interoperate. These switching costs and frictions increase the "stickiness" of the iPhone, making users more beholden to the smartphone manufacturer and platform operator.

- 142. Many prominent, well-financed companies have tried and failed to successfully enter the relevant markets because of these entry barriers. Past failures include Amazon (which released its Fire mobile phone in 2014 but could not profitably sustain its business and exited the following year); Microsoft (which discontinued its mobile business in 2017); HTC (which exited the market by selling its smartphone business to Google in September 2017); and LG (which exited the smartphone market in 2021). Today, only Samsung and Google remain as meaningful competitors in the U.S. performance smartphone market. Barriers are so high that Google is a distant third to Apple and Samsung even though Google controls the development of the Android operating system, which is used by the vast majority of smartphones that compete with Apple's iPhone, including Samsung's.
- Apple can and does profitably forego innovation without fear of losing customers to competitors. For example, Apple's vice president of iPhone marketing explained in February 2020: "In looking at it with hindsight, I think going forward we need to set a stake in the ground for what features we think are 'good enough' for the consumer. I would argue were [sic] already doing *more* than what would have been good enough." After identifying old features that "would have been good enough today if we hadn't introduced [updated features] already," she explained, "anything new and especially expensive needs to be rigorously challenged before it's allowed into the consumer phone."
- 144. Apple's profits and profit margins, for nearly every aspect of the iPhone, are further evidence of Apple's monopoly power. For example, Apple's per-unit smartphone profit margins are far more than its next most profitable rival. Apple charges carriers considerably more than its rivals to

buy and resell its smartphones to the public and employs contract clauses that may impede the ability of carriers to promote rival smartphones, a harmful exercise of monopoly power that is hidden to most consumers. This is on top of the profits Apple extracts in the form of fees from developers—as much as 30 percent when users purchase apps or make in-app payments—and from banks whose customers make credit card transactions through its digital wallet, even though none of Apple's smartphone competitors with digital wallet products charge any fee. Apple predicts that it will collect nearly \$1 billion in worldwide revenue on Apple Pay fees by 2025. A recent report by the U.S. Consumer Financial Protection Bureau suggests these revenues will only increase, as "analysts expect the value of digital wallet tap-to-pay transactions will grow by over 150 percent by 2028."

- 145. Apple increasingly charges developers additional fees to promote their apps in the App Store as well. In fact, this is one of the fastest-growing parts of Apple's services business, with revenue "increasing by more than a third to \$4.4B in FY 2022."
- 146. These indicia of Apple's monopoly power are direct evidence of its monopoly power in the relevant markets.

VI. ANTICOMPETITIVE EFFECTS, INJURY, AND STANDING

A. Anticompetitive Effects

147. Apple protects its monopoly power in smartphones and performance smartphones by using its control over app distribution and app creation to suppress or delay apps, innovations, and technologies that would reduce user switching costs or simply allow users to discover, purchase, and use their apps and content without having to rely on Apple. As a result, Apple faces less competition from rival smartphones and less competitive pressure from innovative, cross-platform technologies not because Apple makes its products better but because it makes other products worse. With the benefit of less competition, Apple extracts extraordinary profits and regulates innovation to serve its interests. This leaves all smartphone users worse off, with fewer choices, higher prices and fees, lower quality smartphones, apps, and accessories, and less innovation from Apple and others. Left unchallenged, Apple will continue to use and strengthen its smartphone monopoly to dictate how companies can create and distribute apps in the future so that they cannot threaten Apple's smartphone monopolies.

148. Apple's conduct has resulted in less choice for smartphone users. Today, only two companies (Google and Samsung) remain as meaningful competitors to Apple in the premium smartphone market.

149. Apple's conduct has increased the technical, behavioral, monetary, and other costs of switching from an iPhone to an alternative smartphone. This undermines competition and entrenches Apple's monopoly power. For example, according to user surveys, one of the biggest reasons iPhone users do not switch to rival smartphones today is to avoid the problems Apple has created for crossplatform messaging. Likewise, Apple exercised its control over app distribution and app creation to impede the development and growth of super apps, depriving users of technology that would have facilitated switching by decreasing user's dependence on Apple and the iPhone. Apple took a similar approach to cloud streaming apps, delaying or suppressing technology that would have made it easier for users to switch to cheaper smartphones. Apple also used its control over app creation, including its control over critical APIs, to impose technical and contractual restrictions on messaging apps, third-party smartwatches, and digital wallets, undermining cross-platform technologies that would have helped users overcome switching costs and friction and ultimately increased smartphone competition."

150. Apple's conduct has delayed or suppressed the emergence of cross-platform technologies that would put competitive pressure on Apple's ability to extract extraordinary profits from users and developers. For example, if developers could distribute their programs through super apps or cloud streaming apps, rather than the App Store, it would put competitive pressure on Apple's ability to control app distribution and app creation as well as the taxes Apple imposes on developers who want to distribute apps to iPhone users. Similarly, third-party digital wallets, or other apps with tap-to-pay functionality, would benefit users and developers by putting more competitive pressure on Apple as well. For example, digital wallets could eventually provide developers an alternative way to process payments and manage customer relationships, forcing Apple to compete more aggressively by lowering fees and improving quality, which would ultimately benefit users. Instead, Apple continues to exert its power over customers and financial institutions when users pay for something with their phone—in the App Store, in an app, or increasingly in the physical world with tap-to-pay.

- 151. Apple is motivated by the anticompetitive purpose of building or maintaining monopoly power in the relevant markets. For example, Apple sacrificed substantial revenues it could have earned from super apps, mini programs, cloud streaming apps, and other third-party apps and accessories. Mobile gaming already accounts for a large and growing portion of Apple's revenue. Popular cloud-streamed gaming apps would offer iPhone users access to popular services (including games) and in turn generate significant revenue for Apple through subscriptions and in-app purchases. Instead, Apple preferred the long-term benefit of reduced smartphone competition to the revenue it would generate from cloud gaming, super apps, and mini programs or the quality (and consumer demand) increase that would flow from this innovation. Apple has also used its control over app distribution and app creation to selectively undermine cross-platform technologies, not because this helps protect users but because it helps protect Apple.
- Apple's decision to grant itself exclusive distribution rights to iPhone users through the Apple App Store. If Apple allowed users to access apps in other ways, users could choose an app store that did not restrict super apps or mini programs, even if Apple ran its App Store the same way it does today. Apple does not allow that choice, however, because if it did developers could write their programs for any smartphone rather than specifically for iOS, just as internet browsers and Apple's QuickTime allowed developers to write programs that worked on a variety of operating systems not just Windows. That would lower users' switching costs and reduce users' and developers' dependence on Apple and the iPhone.
- 153. Apple's smartphone monopoly gives it many levers to maintain its power even in the face of interventions focused on eliminating or disciplining specific anticompetitive practices. This is because Apple's iPhone monopoly, secured by its anticompetitive conduct, grants it the power to set the rules by which most smartphone users buy digital and hardware products, and by which developers are allowed to sell these same products to users. If Apple is forced to change some of these rules, it has the power to adopt new rules, restrictions, or features that reinforce Apple's monopoly and harm competition in other ways. For example, Apple has stated plans to adopt RCS due to market and international regulatory pressure. But Apple continues to contractually restrict third-parties from

accessing other APIs and features that would enable cross-platform messaging apps. In another instance, Apple was enjoined from enforcing certain anti-steering provisions in its agreements with developers. In response, Apple simply created a different set of onerous restrictions on app developers to achieve a similar result. In other cases, Apple has used its control over app distribution to force companies to comply with Apple's policies that may contradict local laws by delaying the review of the offending companies' apps.

- 154. Apple has numerous incentives to continue its anticompetitive conduct. platform messaging apps. In another instance, Apple was enjoined from enforcing certain anti-steering provisions in its agreements with developers. In response, Apple simply created a different set of onerous restrictions on app developers to achieve a similar result. In other cases, Apple has used its control over app distribution to force companies to comply with Apple's policies that may contradict local laws by delaying the review of the offending companies' apps.
- 155. Apple has countless products and services: AirPods, iPads, Music, Apple TV, photos, maps, iTunes, CarPlay, AirDrop, Apple Card, and Cash. These provide future avenues for Apple to engage in anticompetitive conduct and the ability to circumvent remedies. Appropriate forward-looking remedies are necessary to ensure that Apple cannot use these products and services to further entrench its monopoly power.
- 156. Apple's monopolization of smartphone markets gives it tremendous power over the lives of millions of Americans. Today, Apple uses that power to undermine rival smartphones, suppress innovative technologies, and stymie consumer choice. Tomorrow, Apple may use its power to force its users (and their data) to become its next profitable product.

B. There Is No Procompetitive or Other Countervailing Justification for Apple's Anticompetitive Conduct

157. There is no valid, procompetitive justification or benefit from Apple's conduct that would outweigh its anticompetitive effects. Apple's conduct has not resulted in lower prices, higher output, improved innovation, or a better user experience for smartphone users. Nor do privacy or security justify Apple's exclusionary course of conduct.

- 158. Apple imposes contractual restraints on app creation and distribution, imposes hefty fees on many types of smartphone interactions, and conditionally restricts API access on its smartphone platform simply because it can. There are limited if any competitive constraints on this conduct. As a point of comparison, Apple does not engage in such conduct on its Mac laptops and computers. It gives developers the freedom to distribute software directly to consumers on Mac without going through an Apple-controlled app store and without paying Apple app store fees. This still provides a safe and secure experience for Mac users, demonstrating that Apple's control over app distribution and creation on the iPhone is substantially more restrictive than necessary to protect user privacy and security.
- 159. In fact, many alternative technologies that Apple's conduct suppresses would enhance user security and privacy. For example, Apple's conduct targeting digital wallets forces users to share information with Apple even if they would prefer to share that information solely with their bank, medical provider, or other trusted third party. In particular, when an iPhone user provisions a credit or debit card into Apple Wallet, Apple intervenes in a process that could otherwise occur directly between the user and card issuer introducing an additional point of failure for privacy and security. Likewise, super apps or alternative app stores could offer users and their families a more curated selection of apps that better protect user privacy and security. Apple allows enterprise and public sector customers to offer more curated app stores on employee iPhones because it better protects privacy and security.
- 160. Apple is also willing to make the iPhone less secure and less private if that helps maintain its monopoly power. For example, text messages sent from iPhones to Android phones are unencrypted as a result of Apple's conduct. If Apple wanted to, Apple could allow iPhone users to send encrypted messages to Android users while still using iMessage on their iPhone, which would instantly improve the privacy and security of iPhone and other smartphone users.
- as doing so benefits Apple. For example, Apple allows developers to distribute apps through its Apple Store that collect vast amounts of personal and sensitive data about users—including children—at the expense of its users' privacy and security. Apple also enters agreements to share in the revenue generated from advertising that relies on harvesting users' personal data. For example, Apple accepts

massive payments from Google to set its search engine as the default in the Safari web browser even though Apple recognizes that other search engines better protect user privacy.

162. Ultimately, Apple chooses to make the iPhone private and secure when doing so benefits Apple; Apple chooses alternative courses when those courses help Apple protect its monopoly power. Apple's conduct underscores the pretextual nature of any claim that Apple's conduct is justified by protecting user privacy or security.

C. Antitrust Injury and Standing

- Apple, at prices that were that were higher than they otherwise would have been, the prices being inflated as a result of the monopolistic and anticompetitive practices by Apple alleged herein. Absent the unlawful monopolistic and anticompetitive conduct described here, Named Plaintiffs and Class Members would not have paid supra-competitive prices for their smartphones and performance smartphones. Named Plaintiffs have standing as direct purchasers of goods and services at inflated prices, who have incurred overcharges, as alleged herein.
- 164. Named Plaintiffs and putative Class Members were compelled to continue purchasing iPhones and services from Apple, and to pay inflated prices for those goods and related services, as a result of the monopolistic and anticompetitive practices by Apple alleged herein. As a result of the monopolistic and anticompetitive practices alleged herein, moreover, Named Plaintiffs and putative Class Members were denied choice of apps and related products, and the functionality of their devices was downgraded. Apple's anticompetitive practices also stalled, limited or foreclosed competition and innovation in the performance smartphone and smartphone markets. Named Plaintiffs have standing as direct purchasers of goods and services at inflated prices, who have incurred overcharges and/or experienced degraded functionality and/or choice, as alleged herein.
- 165. Apple thus caused Named Plaintiffs and putative Class Members to suffer damages, including overcharge damages. The ability to charge monopolistic, supracompetitive prices to purchasers of the iPhone, including direct purchasers such as Named Plaintiffs and the putative Class Members, was the intended effect and a direct effect of the monopolistic and anticompetitive practices by Apple alleged herein.

166. Apple's monopolistic and anticompetitive conduct is ongoing and continuing. As a result, Named Plaintiffs and the putative Class Members will likely incur future overcharges, degraded performance and functionality, and/or the loss of choice in smartphones, performance smartphones, accessories, and related services consistent with the allegations as alleged herein. Both the actual harm and the threat of future harm are cognizable antitrust injuries directly caused by Apple's violations of federal and state antitrust laws.

VII. CLASS ACTION ALLEGATIONS

- 167. Plaintiffs bring this action for damages and injunctive relief, pursuant to Fed. R. Civ. P. 23(b)(2) and (3), on behalf of themselves and the following classes:
 - A. **Nationwide Class**: All persons and entities, resident in the United States, who purchased in iPhone directly from Apple other than for resale.
 - B. **New York Class**: All persons and entities, resident in the State of New York, who purchased an iPhone other than for resale.
 - C. **Illinois Class:** All persons and entities, resident in the State of Illinois, who purchased an iPhone other than for resale.
 - D. **New Jersey Class:** All persons and entities, resident in the State of New Jersey, who purchased an iPhone other than for resale.

The Classes exclude Defendant Apple, its parent(s), subsidiaries, or affiliates, its employees, officers, directors, and agents; the Court, its staff, and their immediate family members; and Plaintiffs' counsel.

- 168. The requirements of Rule 23 are met here and this action is proper for class treatment.
- A. **Numerosity:** The Classes are so numerous that joinder of all members is impracticable. The number of members in the proposed classes is not available to Plaintiffs at this time, but is believed to exceed many million members, whose identities may be ascertained through the records of Defendant Apple. The identities of the members of the Plaintiff classes are known to Apple, including through its Apple ID system, which trackers purchasers of the iPhone and users of its ecosystem, among other records.
- B. **Commonality:** There are questions of law and fact common to the Classes, including:

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- i. Whether there exists a relevant product and/or subproduct market(s) for smartphones and/or performance smartphones;
- ii. Whether Defendant Apple has unlawfully monopolized, attempted to monopolize, or conspired to monopolize the relevant market and/or submarket(s);
- iii. Whether Defendant Apple has restrained or harmed competition in the relevant market and/or submarket(s);
- iv. Whether Plaintiffs and the members of the proposed classes have been injured by Defendant Apple's conduct, the nature and amount of their damages, and their entitlement to attorneys' fees and/or costs;
- v. Whether injunctive or declaratory relief should be issued to restrain Defendant Apple's anticompetitive conduct and restore competition.
- C. **Typicality:** Plaintiffs' claims are typical of the claims of the members of the proposed classes, as the factual and legal basis for Defendant Apple's liability is common and resulted in injury to all members of the proposed classes.
- D. Adequate Representation: Plaintiffs will fairly and adequately represent the interests of the proposed classes; have no interests that are antagonistic to the proposed classes; and their interests do not conflict with the classes they seek to represent. Plaintiffs have retained experienced and competent counsel who will pursue and protect the interests of the proposed classes.
- E. **Risk of Inconsistent Adjudication:** The prosecution of separate actions by members of the proposed classes creates a risk of varying and/or inconsistent adjudication, with the effect of establishing incompatible standards of conduct for Defendant Apple.
- F. **Predominance:** The questions of law and fact common to the proposed classes, including those of liability and damages, predominate over any questions affecting only individual members.
- G. **Superiority**: A class action is superior to other available methods for the adjudication of this controversy. A class is the most efficient method for litigating Defendant

Apple's liability, and given the high costs of litigation, the only economically feasible method for Plaintiffs and the proposed classes to redress Defendant Apple's anticompetitive conduct.

VIII. TOLLING OF THE STATUTE OF LIMITATIONS

- 169. Plaintiffs and Class Members did not know, and could not have known, of Apple's anticompetitive conduct as alleged herein. Plaintiffs and Class Members could not discover that the prices they paid were higher than they should have been because of Apple's anticompetitive and unfair conduct, and had little choice but to pay Apple's supra-competitive prices when they needed to purchase replacement devices, because of the conduct by Apple as alleged herein to lock consumers into the Apple ecosystem.
- 170. Reasonably diligent consumers would not know or have reason to know of the conduct alleged herein. Plaintiffs and Class Members are merely consumers of smartphones and performance smartphones were not active participants in the market.
- 171. Plaintiffs' claims accrue each time they suffered an injury: each time they paid prices for iPhones that were higher than they would have paid absent Apple's unlawful conduct. Each sale of iPhones at artificially inflated prices constitutes an overt act in furtherance of Apple's unlawful monopoly.

IX. CAUSES OF ACTION

COUNT ONE — VIOLATION OF THE SHERMAN ACT, 15 U.S.C. § 2 – MONOPOLIZATION OF THE PERFORMANCE SMARTPHONE MARKET

- 172. Plaintiffs repeat and reallege each and every allegation set forth above as if fully set forth herein.
- 173. Plaintiffs bring this claim on their behalf and on behalf of each member of the Nationwide Class defined above.
 - 174. The relevant market is the market for performance smartphones in the United States.
 - 175. Apple has monopoly power in the U.S. performance smartphone market.
- 176. Apple intentionally and willfully monopolized and illegally maintained its monopoly of the U.S. performance smartphone market through an anticompetitive and exclusionary course of

conduct as described herein. Each of Apple's actions individually and collectively increased,

maintained, or protected its performance smartphone monopoly.
Apple's anticompetitive acts include, but are not limited to, its control of the Apple App Store and
contractual restrictions against app creation, distribution, and access to APIs that have impeded apps
and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and
digital wallets. Because the areas identified in this complaint reflect a non-exhaustive list of Apple's
anticompetitive acts, as technology advances, both the technologies impeded and the specific manner
of impediment may shift in response to technological and regulatory change consistent with Apple's
past conduct.

- 177. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process.
- 178. Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by Apple's anticompetitive and unlawful conduct.
- 179. Apple has the power to exclude competition in the relevant market, and it has used that power, including by way of its unlawful practices in restraint of trade as described herein, to maintain and expand its monopoly power in that market.

COUNT TWO — VIOLATION OF THE SHERMAN ACT, 15 U.S.C. § 2 – ATTEMPTED MONOPOLIZATION OF THE PERFORMANCE SMARTPHONE MARKET

- 180. Plaintiffs repeat and reallege each and every allegation set forth above as if fully set forth herein.
- 181. Plaintiffs bring this claim on their behalf and on behalf of each member of the Nationwide Class defined above.
 - 182. The relevant market is the market for performance smartphones in the United States.
 - 183. Apple has attempted to monopolize the U.S. performance smartphone market.
- 184. Apple intentionally and willfully attempted to monopolize the U.S. performance smartphone market through an anticompetitive and exclusionary course of conduct as described herein.

Each of Apple's actions individually and collectively increased or protected its power in the

performance smartphone market.

Apple's anticompetitive acts include, but are not limited to, its control of the Apple App Store and contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. Because the areas identified in this complaint reflect a non-exhaustive list of Apple's anticompetitive acts, as technology advances, both the technologies impeded and the specific manner of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

- 185. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process. Apple's anticompetitive acts have had harmful effects on competition and the performance smartphone class.
- 186. Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by Apple's anticompetitive and unlawful conduct.
- 187. Apple has a specific intent to achieve monopoly power in the U.S. market for performance smartphones. Apple's anticompetitive conduct has created a dangerous probability that it will achieve monopoly power in the U.S. market for performance smartphones, if its unlawful restraints are not checked.
- 188. Apple has behaved as alleged herein in an attempt to obtain a monopoly in the performance smartphone market, with the effect being that competition is foreclosed, innovation is stifled, and consumer choice is diminished.

COUNT THREE — VIOLATION OF THE SHERMAN ACT, 15 U.S.C. § 2 – MONOPOLIZATION OF THE SMARTPHONE MARKET

- 189. Plaintiffs repeat and reallege each and every allegation set forth above as if fully set forth herein.
- 190. Plaintiffs bring this claim on their behalf and on behalf of each member of the Nationwide Class defined above.

- 191. The relevant market is the market for smartphones in the United States.
- 192. Apple has monopoly power in the U.S. smartphone market.
- 193. Apple intentionally and willfully monopolized and illegally maintained its monopoly of the U.S. smartphone market through an anticompetitive and exclusionary course of conduct as described herein. Each of Apple's actions individually and collectively increased, maintained, or protected its smartphone monopoly.

Apple's anticompetitive acts include, but are not limited to, its control of the Apple App Store and contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. Because the areas identified in this complaint reflect a non-exhaustive list of Apple's anticompetitive acts, as technology advances, both the technologies impeded and the specific manner of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

- 194. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process.
- 195. Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by Apple's anticompetitive and unlawful conduct.
- 196. Apple has the power to exclude competition in the relevant market, and it has used that power, including by way of its unlawful practices in restraint of trade as described herein, to maintain and expand its monopoly power in that market.

COUNT FOUR — VIOLATION OF THE SHERMAN ACT, 15 U.S.C. § 2 – ATTEMPTED MONOPOLIZATION OF THE SMARTPHONE MARKET

- 197. Plaintiffs repeat and reallege each and every allegation set forth above as if fully set forth herein.
- 198. Plaintiffs bring this claim on their behalf and on behalf of each member of the Nationwide Class defined above.
 - 199. The relevant market is the market for smartphones in the United States.

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- 200. Apple has attempted to monopolize the U.S. smartphone market.
- 201. Apple intentionally and willfully attempted to monopolize the U.S. smartphone market through an anticompetitive and exclusionary course of conduct as described herein. Each of Apple's actions individually and collectively increased or protected its power in the smartphone market. Apple's anticompetitive acts include, but are not limited to, its control of the Apple App Store and contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. Because the areas identified in this complaint reflect a non-exhaustive list of Apple's anticompetitive acts, as technology advances, both the technologies impeded and the specific manner of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.
- 202. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process. Apple's anticompetitive acts have had harmful effects on competition and the performance smartphone class.
- Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm 203. caused by Apple's anticompetitive and unlawful conduct.
- 204. Apple has a specific intent to achieve monopoly power in the U.S. market for smartphones. Apple's anticompetitive conduct has created a dangerous probability that it will achieve monopoly power in the U.S. market for smartphones, if its unlawful restraints are not checked.
- 205. Apple has behaved as alleged herein in an attempt to obtain a monopoly in the performance smartphone market, with the effect being that competition is foreclosed, innovation is stifled, and consumer choice is diminished.

COUNT FIVE — VIOLATIONS OF STATE ANTITRUST LAWS – MONOPOLIZATION

- 206. Plaintiffs repeat and reallege each and every allegation set forth above as if fully set forth herein.
- Plaintiffs bring this claim on their behalf and on behalf of each member of the New 207. York, New Jersey, and Illinois Classes defined above.

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208. The relevant markets are the markets for smartphones and performance smartphones in the United States.

Apple intentionally and willfully monopolized and illegally maintained its monopoly of

- 209. Apple has monopoly power in the U.S. smartphone and performance smartphones markets.
- the U.S. smartphone and performance markets through an anticompetitive and exclusionary course of conduct as described herein. Each of Apple's actions individually and collectively increased, maintained, or protected its smartphone monopoly.

 Apple's anticompetitive acts include, but are not limited to, its control of the Apple App Store and contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. The areas identified in this complaint reflect a non-exhaustive list of Apple's anticompetitive acts but as technology advances, both the technologies impeded and the specific manner of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.
- 211. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process.
- 212. Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by Apple's anticompetitive and unlawful conduct.
- 213. Apple has the power to exclude competition in the relevant markets, and it has used that power, including by way of its unlawful practices in restraint of trade as described herein, to maintain and expand its monopoly power in those markets.

COUNT SIX — VIOLATIONS OF STATE ANTITRUST LAWS – ATTEMPTED MONOPOLIZATION

214. Plaintiffs repeat and reallege each and every allegation set forth above as if fully set forth herein.

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York and Illinois Classes defined above. 216.

Plaintiffs bring this claim on their behalf and on behalf of each member of the New

- Apple's conduct violated at least the following state laws:
 - A. 740 Ill. Comp. Stat. 10/1 et seq.;
 - В. N.Y. Gen. Bus. Law § 340, et seq.
- 217. The relevant markets are the markets for smartphones and performance smartphones in the United States.
- 218. Apple has attempted to monopolize the U.S. smartphone and performance smartphone markets.
- 219. Apple intentionally and willfully attempted to monopolize the U.S. smartphone and performance smartphone markets through an anticompetitive and exclusionary course of conduct as described herein. Each of Apple's actions individually and collectively increased or protected its power in the smartphone and performance smartphone markets.
- Apple's anticompetitive acts include, but are not limited to, its control of the Apple App Store and contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. Because the areas identified in this complaint reflect a non-exhaustive list of Apple's anticompetitive acts, as technology advances, both the technologies impeded and the specific manner of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.
- 220. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process.
- 221. Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by Apple's anticompetitive and unlawful conduct.
- 222. Apple has a specific intent to achieve monopoly power in the U.S. markets for smartphones and performance smartphones. Apple's anticompetitive conduct has created a dangerous

probability that it will achieve monopoly power in the U.S. markets for smartphones and performance smartphones, if its unlawful restraints are not checked.

223. Apple has behaved as alleged herein in an attempt to obtain a monopoly in the smartphone and performance smartphone markets, with the effect being that competition is foreclosed, innovation is stifled, and consumer choice is diminished.

COUNT SEVEN — VIOLATIONS OF STATE CONSUMER PROTECTION LAWS

- 224. Plaintiffs repeat and reallege each and every allegation set forth above as if fully set forth herein.
- 225. Plaintiffs bring this claim on their behalf and on behalf of each member of the Nationwide, Illinois, New Jersey, and New York Classes defined above.
 - 226. Apple's conduct violated at least the following state laws:
 - A. Illinois, 815 Ill. Comp. Stat. Ann. 505/1;
 - B. California, Cal. Business and Professions Code § 17200, et seq.;
 - C. New York, N.Y. Gen. Bus. Law § 349; and
 - D. New Jersey, N.J. Stat. Ann. §§ 56:8-1, et seq.
- 227. Plaintiffs and Class Members are "persons" or "consumers" within the meaning of the relevant state statutes.
- 228. Apple is engaged in "trade or commerce", "sales" of "merchandise" within the meaning of the relevant state statutes.
- 229. Apple engaged in unfair methods of competition and/or acts or practices by control of the Apple App Store and contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. Apple's conduct offends established public policy and is immoral, unethical, oppressive, unscrupulous, or substantially injurious to consumers. Apple's violations present a continuing risk to consumers. Apple's unlawful acts and practices affect the public interest.

- 230. Plaintiffs and Class Members were damaged and injured by Apple's unlawful and unfair methods of competition and practices in violation of the relevant state statutes. Plaintiffs paid artificially high prices as a result of Apple's scheme, and were denied choice and their smartphones degraded by the conduct herein. But for Apple's conduct, Plaintiffs would have benefitted from a competitive market and Plaintiffs would not have suffered injury by paying artificially high prices.
- 231. Apple's conduct was intentional and their violations were known and/or willful. Apple knew or should have known that their conduct violated the relevant state laws.
- 232. Apple's conduct allowed it to charge artificially high prices and damaged and injured Plaintiffs and the Class Members.
- 233. Plaintiff and the Class Members seek all remedies available including an order enjoining Apple's unfair methods of competition and/or unfair acts and practices; damages as allowed; attorneys' fees, costs; and any other just and proper relief available.

X. REQUEST FOR RELIEF

- 234. Plaintiffs, individually and on behalf of all others similarly situated, request that the Court enter judgment against Defendants, and for Plaintiffs, as follows:
- A. Certify the Classes under Federal Rules of Civil Procedure 23(b)(2) and 23(b)(3), or alternatively 23(b)(4), and appoint Plaintiffs as representatives of the Classes and appoint Plaintiffs' counsel as Class counsel;
- B. Award all recoverable compensatory, statutory, and other damages sustained by Plaintiffs and the Classes, including penalties, and all other relief allowed under applicable law;
- C. Award all costs of prosecuting this action, including attorneys' fees and expert fees as may be allowable under applicable law;
 - D. Award both pre-judgment and post-judgment interest on any amounts awarded;
 - E. Award treble or punitive damages insofar as they are allowed by applicable laws;
 - F. Award appropriate individual relief as requested above; and
- G. Grant such other and further relief, including declaratory, injunctive, and equitable relief, as the Court may deem proper.

1	XI. DEMAND FOR JURY TRIAL
2	Plaintiffs hereby demand a trial by jury on all issues so triable.
3	DATED this 23rd day of May, 2024.
4	KELLER ROHRBACK L.L.P.
5	
6	By /s/ Alison E. Chase
7	Alison E. Chase (SBN 226976) 801 Garden Street, Suite 301
8	Santa Barbara, CA 93101 (805) 456-1496, Fax (805) 456-1497
9	achase@kellerrohrback.com
10	Derek W. Loeser (Pro Hac Vice forthcoming) Gretchen Freeman Cappio (Pro Hac Vice forthcoming)
11	Ryan McDevitt (Pro Hac Vice forthcoming)
12	1201 Third Avenue, Suite 3200 Seattle, WA 98101
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